

## **REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed February 20, 2008. Upon entry of the amendments in this response, claims 15 – 27, 29 and 31 – 38 remain pending. In particular, Applicants amend claims 19 – 21 and 32. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **I. Allowable Subject Matter**

The Office Action indicates that claims 20 and 22 – 25 would be allowable if rewritten to overcome the 35 U.S.C. §112 rejections, set forth in the Office Action. Applicants sincerely appreciate this indication of allowable subject matter and amend claim 20, as indicated above.

### **II. Claim Objections**

The Office Action objects to claim 26 because the Office Action apparently requests identification in the drawings and specification of elements in claim 26. Applicants are aware of no such requirement, but point to (without limitation) FIGS. 4A and 4B and corresponding text in the Written description for support.

### **III. Rejections Under 35 U.S.C. §112**

The Office Action indicates that claim 35 stands rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. More specifically, the Office Action alleges the specification fails to disclose a delta-sigma modulator coupled to a data supervisor and a clock detector. Applicants respectfully traverse this rejection. As clearly illustrated in FIG. 4B, the delta-sigma modulator 62, the clock detector 100, and the data supervisor each receive the same clock signal 110. Consequently, these elements are coupled, as recited in claim 35. For at least this reason, claim 35 meets all the requirements of 35 U.S.C. §112.

Additionally, the Office Action indicates that claims 19 – 25 and 32 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim that subject matter which Applicants regard as the invention. Applicants amend claims 19 – 21 and 32 and submit that claims 19 – 25 and 32, as amended, meet all the requirements of 35 U.S.C. §112.

#### **IV. Rejections Under 35 U.S.C. §102**

##### **A. Claim 32 is Allowable Over Kawasugi**

The Office Action indicates that claim 32 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Japanese Patent Number JP356143739A (“Kawasugi”). Applicants respectfully traverse this rejection on the grounds that *Kawasugi* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 32 recites:

A transmission unit, comprising:  
a signal integrity supervisor configured to generate a response to a digital data stream having an anomalous condition, the signal integrity supervisor further configured to forward the response to at least one of the following:  
control logic configured to reset the transmission unit, and  
*a line driver within the transmission unit, wherein the response powers down the line driver.*  
*(Emphasis added)*

Claim 32 is allowable for at least the reason that *Kawasugi* fails to disclose, teach, or suggest a transmission unit, comprising... *a line driver within the transmission unit, wherein the response powers down the line driver*” as recited in claim 1. First, the Office Action fails to even suggest that this element is disclosed in *Kawasugi* (see OA page 4, element 9). Second, *Kawasugi* discloses “[s]ignal S is sent to receiving circuit 22 via FS demodulating circuit 21 and then extracted by reception controlling circuit 24, and it is sent to abnormality output circuit 27 and outputted to output terminal 28 as an abnormal signal” (Abstract). However, *Kawasugi* fails to disclose or even suggest “*a line driver within the transmission*

*unit, wherein the response powers down the line driver*" as recited in claim 32. For at least these reasons, claim 32 is allowable.

**B. Claim 26 is Allowable Over Hatata**

The Office Action indicates that claim 26 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 4,481,629 ("Hatata"). Applicants respectfully traverse this rejection on the grounds that *Hatata* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 26 recites:

A circuit, comprising:  
means for monitoring a digital data stream, wherein the means for monitoring a digital data stream comprises a signal integrity supervisor; and  
means for generating an output signal in response to an anomalous condition in the digital data stream, wherein the means for generating an output signal is responsive to a digital data stream having a number of consecutive data values **of equal magnitude** wherein the number of consecutive data values reaches a predetermined maximum value.

*(Emphasis added)*

Applicants respectfully submit that claim 26 is allowable for at least the reason that *Hatata* fails to disclose, teach, or suggest a "circuit, comprising... means for generating an output signal in response to an anomalous condition in the digital data stream, wherein the means for generating an output signal is responsive to a digital data stream having a number of consecutive data values **of equal magnitude** wherein the number of consecutive data values reaches a predetermined maximum value" as recite din claim 26. More specifically, *Hatata* discloses:

an abnormal monitoring device (82) compris[ing] a memory circuit (3) for recording  $n$  consecutive signals ( $n \geq 3$ ) such as three consecutive signals (for three samples) (1b) and a consistency detecting circuit (4) such as a comparator well known in the art for testing the consistency of the data signals for three samples stored in the memory circuit (3) and to output a "1" signal (4a) to indicate an abnormal state when the three samples are the same. (Column 2, line 9).

However, nowhere does *Hata* appear to disclose or even suggest a digital data stream having a number of consecutive data values **of equal magnitude**, as recited in claim 26. For at least this reason, claim 26 is allowable.

V. **Rejections Under 35 U.S.C. §103**

A. **Claim 33 is Allowable Over Kawasugi in view of Buer**

The Office Action indicates that claim 33 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("Kawasugi") in view of U.S. Patent Number 6,188,257 ("Buer"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Buer* fails to disclose, teach, or suggest all of the elements of claim 33. More specifically, dependent claim 33 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 32. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

B. **Claim 34 is Allowable Over Kawasugi**

The Office Action indicates that claim 34 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("Kawasugi"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* fails to disclose, teach, or suggest all of the elements of claim 34. More specifically, dependent claim 34 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 32. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

C. **Claim 15 is Allowable Over Kawasugi in view of Nakatani**

The Office Action indicates that claim 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("Kawasugi") in view of U.S.

Patent Number 6,130,619 ("*Nakatani*"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Nakatani* fails to disclose, teach, or suggest all of the elements of claim 15. More specifically, claim 15 recites:

A transmission signal integrity supervisor within an analog front end (AFE), wherein the transmission signal integrity supervisor is configured to detect anomalous conditions and protect the AFE, the transmission signal integrity supervisor comprising:

a clock detector configured to receive a clock signal input and generate a first output signal in response to an at least one clock signal input anomalous condition, wherein the clock detector is further configured to forward the first output signal to at least one of control logic and devices external to the AFE; and

a data supervisor configured to receive a digital data stream and generate a second output signal in response to an at least one digital data stream anomalous condition, wherein the data supervisor is further configured to ***forward the second output signal to at least one of a line driver within the AFE and devices external the AFE.***

*(Emphasis added)*

Applicants respectfully submit that claim 15 is allowable for at least the reason that neither *Kawasugi* nor *Nakatani*, taken alone or in combination, discloses, teaches, or suggest a "transmission signal integrity supervisor comprising... a data supervisor configured to receive a digital data stream and generate a second output signal in response to an at least one digital data stream anomalous condition, wherein the data supervisor is further configured to ***forward the second output signal to at least one of a line driver within the AFE and devices external the AFE***" as recited in claim 15. More specifically, the Office Action argues that *Kawasugi* discloses this element with circuit 13. However, nowhere in *Kawasugi* can one reasonably make this conclusion. According to *Kawasugi*, circuit 13 is a "transmitting circuit" (Abstract), which is completely different than a line driver.

Additionally, *Nakatani* fails to overcome the deficiencies of *Kawasugi*. For at least these reasons, claim 15 is allowable.

**D. Claims 16, 19, 37, and 38 are Allowable Over Kawasugi in view of Nakatani**

The Office Action indicates that claims 16, 19, 37, and 38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("Kawasugi") in view of U.S. Patent Number 6,130,619 ("Nakatani"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Nakatani* fails to disclose, teach, or suggest all of the elements of claims 16, 19, 37, and 38. More specifically, dependent claims 16 and 19 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 15. Dependent claims 37 and 38 are believed to be allowable for at least the reason that they depend from allowable independent claim 32. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**E. Claim 17 is Allowable Over Kawasugi in view of Nakatani further in view of Cummiskey**

The Office Action indicates that claim 17 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("Kawasugi") in view of U.S. Patent Number 6,130,619 ("Nakatani") further in view of U.S. Patent Number 4,353,128 ("Cummiskey"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Nakatani* further in view of *Cummiskey* fails to disclose, teach, or suggest all of the elements of claim 17. More specifically, dependent claim 17 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 15. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**F. Claim 18 is Allowable Over Kawasugi in view of Nakatani further in view of Kodra**

The Office Action indicates that claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("Kawasugi") in view of U.S.

Patent Number 6,130,619 ("*Nakatani*") further in view of U.S. Patent Number 6,226,663 ("*Kodra*"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Nakatani* further in view of *Kodra* fails to disclose, teach, or suggest all of the elements of claim 18. More specifically, dependent claim 18 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 15. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**G. Claim 21 is Allowable Over Kawasugi in view of Nakatani further in view of Kamoi**

The Office Action indicates that claim 21 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("*Kawasugi*") in view of U.S. Patent Number 6,130,619 ("*Nakatani*") further in view of U.S. Patent Number 5,280,483 ("*Kamoi*"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Nakatani* further in view of *Kamoi* fails to disclose, teach, or suggest all of the elements of claim 21. More specifically, dependent claim 21 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 15. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**H. Claims 35 and 36 are Allowable Over Kawasugi in view of Nakatani further in view of Hollenbach**

The Office Action indicates that claims 35 and 36 stand rejected under §35 U.S.C. §103(a) as being unpatentable over Japanese Patent Number JP356143739A ("*Kawasugi*") in view of U.S. Patent Number 6,130,619 ("*Nakatani*") further in view of U.S. Patent Number 6,396,877 ("*Hollenbach*"). Applicants respectfully traverse this rejection for at least the reason that *Kawasugi* in view of *Nakatani* further in view of *Hollenbach* fails to disclose, teach, or suggest all of the elements of claims 35 and 36. More specifically, dependent claims 35 and 36 are believed to be allowable for at least the reason that these claims depend from allowable

independent claim 15. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**I. Claim 27 is Allowable Over Hatata in view of Bartelink**

The Office Action indicates that claim 27 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Number 4,481,629 ("Hatata") in view of U.S. Patent Number 4,390,750 ("Bartelink"). Applicants respectfully traverse this rejection for at least the reason that *Hatata* in view of *Bartelink* fails to disclose, teach, or suggest all of the elements of claim 27. More specifically, dependent claim 27 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 26. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**J. Claim 29 is Allowable Over Hatata in view of Nakatani**

The Office Action indicates that claim 29 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Number 4,481,629 ("Hatata") in view of U.S. Patent Number 6,130,619 ("Nakatani"). Applicants respectfully traverse this rejection for at least the reason that *Hatata* in view of *Nakatani* fails to disclose, teach, or suggest all of the elements of claim 29. More specifically, dependent claim 29 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 26. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**K. Claim 31 is Allowable Over Hatata in view of Buer**

The Office Action indicates that claim 31 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Number 4,481,629 ("Hatata") in view of U.S. Patent Number 6,188257 ("Buer"). Applicants respectfully traverse this rejection for at least the reason that *Hatata* in view of *Buer* fails to disclose, teach, or suggest all of the elements of claim 31.

More specifically, dependent claim 31 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 26. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or addressed, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and Official Notice, or statements interpreted similarly, should not be considered well-known for the particular and specific reasons that the claimed combinations are too complex to support such conclusions and because the Office Action does not include specific findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

---

/afb/  
**Anthony F. Bonner Jr. Reg. No. 55,012**

**THOMAS, KAYDEN,  
HORSTEMEYER & RISLEY, L.L.P.**  
Suite 1500  
600 Galleria Parkway N.W.  
Atlanta, Georgia 30339  
(770) 933-9500